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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,346	04/20/2004	Tsuyoshi Tanabe	Q80785	2603

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EXAMINER	
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/827,346	TANABE ET AL.	
	Examiner	Art Unit	
	Steven Kau	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1 and 10* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/20/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on April 20, 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

3. Claims 1 and 10 are objected to because of the following informalities: With regard to claim 1, recites, "(c) at least one of a first reference patch which displays color information serving..." (emphasis added). The underlined words do not clearly define the quantity of "a first reference patch". Claim 10 is objected to for the same reason as discussed for claim 1 objection in this paragraph.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows:

Claims 1-9 define a sheet for color calibration, which are merely claiming for a piece of paper or printed medium. The sheet claims for (a) output medium information, (b) a test pattern for color calibration, and (c) reference patches for color correction and feeding length correction. The recited "sheet" is neither a "machine", "composition of matter", "manufacture", nor a "useful process". A "sheet" does not fall within any of the four statutory classes of 35 U.S.C. §101.

> A "manufacture" is defined as "the production of articles for use from raw materials or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." Diamond v. Chakrabarty, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting American Fruit Growers, Inc. v. Brogdex Co., 283 U.S. 1, 11, 8 USPQ 131, 133 (1931).

Therefore, claims 1-9 are rejected under 35 U.S.C. §101.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

7. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (US 6,975,418) in view of Otsuki (US 2003/0025922).

Regarding **claim 1**, Ohta discloses a copying machine, in that he teaches a sheet (Fig. 8) for color calibration (col 2, lines 44-58), comprising: (a) an output medium information patch which displays output medium information {Ohta discloses an output patch information for color calibration} (Fig. 8, col 10, lines 42-59); (b) a test pattern for color calibration (Fig. 8, col 10, lines 42-67 & col 11, lines 1-2); and (c) at least one of a first reference patch which displays color information serving as a reference for color correction when the output medium information patch is read {Ohta discloses a host computer compares the respective measured (form output medium) with reference values for the 32 patches preliminary stored and based on a result of the comparison, updates the content of a correction table for correcting image data of each color C, M, Y, K.} (Fig. 3, col 2, lines 64-67 & col 3, lines 1-17).

Ohta differs from claim 1, in that he does not teach that a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read.

Otsuki discloses a correction of paper feed error in printer, in that he teaches a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read {Ohta teaches and suggests embodiments of outline procedure of paper feed correction; details of test pattern printing method and methods used to determine paper feed correction value} (Figures 8, 11 and 12, Para [0050], [0051], [0086], [0087] and [0091]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include a second reference

patch serving as a reference for correcting a feed length when the sheet for color calibration is read taught by Otsuki to improve image quality due to various type of printing media for printing device have been commercially marketed and coloring properties o finks differ in different printing media, and therefore paper feeding correctly plays an important roles for image quality (Para [0005]).

Regarding **claim 2**, Ohta teaches wherein the output medium information patch and the test pattern for color calibration are formed by exposing a photosensitive material with a predetermined amount of light exposure (col 14, lines 32-47).

Regarding **claim 3**, Ohta teaches wherein the first reference patch is formed by exposing a photosensitive material with a predetermined amount of light exposure (col 14, lines 32-47).

Ohta differs from claim 3, in that he does not teach wherein the second reference patch is formed by exposing a photosensitive material with a predetermined amount of light exposure.

Otsuki teaches wherein the second reference patch is formed by exposing a photosensitive material with a predetermined amount of light exposure (Fig. 6, Para. [0080])

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include the second reference patch is formed by exposing a photosensitive material with a predetermined amount of light exposure taught by Otsuki to improve image quality due to various type of printing media for printing device have been commercially

marketed and coloring properties o finks differ in different printing media, and therefore paper feeding correctly plays an important roles for image quality (Para [0005]).

Regarding **claim 10**, Ohta teaches a color calibrating method when an image is recorded on a sheet (Fig. 8) for color calibration (col 2, lines 44-58) which includes: an output medium information patch which displays output medium information {Ohta discloses an output patch information for color calibration} (Fig. 8, col 10, lines 42-59); a test pattern for color calibration (Fig. 8, col 10, lines 42-67 & col 11, lines 1-2); and at least one of a first reference patch which displays color information serving as a reference for color correction when the output medium information patch is read {Ohta discloses a host computer compares the respective measured (form output medium) with reference values for the 32 patches preliminary stored and based on a result of the comparison, updates the content of a correction table for correcting image data of each color C, M, Y, K.} (Fig. 3, col 2, lines 64-67 & col 3, lines 1-17), and calibrating a color of an image based on the read test pattern information and output medium information (col 4, lines 11-39).

Ohta differs from claim 10, in that he does not teach a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read, the method comprising: feeding in one direction or reading in a reciprocate manner the sheet for color calibration along a direction of forming the test pattern and the output medium information patch.

Otsuki teaches a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read {Ohta teaches and suggests embodiments of outline procedure of paper feed correction; details of test pattern printing method and methods used to determine paper feed correction value} (Figures 8, 11 and 12, Para [0050], [0051], [0086], [0087] and [0091]), the method comprising: feeding in one direction or reading (scanning) in a reciprocate manner the sheet for color calibration along a direction of forming the test pattern and the output medium information patch (Para. [0025] and [0099]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read, the method comprising: feeding in one direction or reading in a reciprocate manner the sheet for color calibration along a direction of forming the test pattern and the output medium information patch taught by Otsuki to improve image quality due to various type of printing media for printing device have been commercially marketed and coloring properties o finks differ in different printing media, and therefore paper feeding correctly plays an important roles for image quality (Para [0005]).

Regarding **claim 11**, Ohta teaches image recording apparatus (fig. 1, host computer) comprising: (A) a color calibration sheet forming portion which forms a sheet (Fig. 8) for color calibration (col 2, lines 44-58) including an output medium information patch which displays output medium information {Ohta discloses an

output patch information for color calibration} (Fig. 8, col 10, lines 42-59), a test pattern for color calibration (Fig. 8, col 10, lines 42-67 & col 11, lines 1-2), and at least one of a first reference patch which displays color information serving as a reference for color correction when the output medium information patch is read {Ohta discloses a host computer compares the respective measured (form output medium) with reference values for the 32 patches preliminary stored and based on a result of the comparison, updates the content of a correction table for correcting image data of each color C, M, Y, K.} (Fig. 3, col 2, lines 64-67 & col 3, lines 1-17), (B) a reading portion which reads the sheet for color calibration (col 4, lines 11-39); and (C) a calibration control portion which carries out calibration of a color of an image according to the reading result (Fig. 1, col 18, lines 8-22).

Ohta differs from claim 11, in that he does not teach a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read.

Otsuki teaches a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read {Ohta teaches and suggests embodiments of outline procedure of paper feed correction; details of test pattern printing method and methods used to determine paper feed correction value} (Figures 8, 11 and 12, Para [0050], [0051], [0086], [0087] and [0091]), the method comprising: feeding in one direction or reading (scanning) in a reciprocate manner the sheet for color calibration along a direction of forming the test pattern and the output medium information patch (Para. [0025] and [0099]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include a second reference patch serving as a reference for correcting a feed length when the sheet for color calibration is read, the method comprising: feeding in one direction or reading in a reciprocate manner the sheet for color calibration along a direction of forming the test pattern and the output medium information patch taught by Otsuki to improve image quality due to various type of printing media for printing device have been commercially marketed and coloring properties o finks differ in different printing media, and therefore paper feeding correctly plays an important roles for image quality (Para [0005]).

Regarding **claim 12**, Ohta teaches wherein the calibration control portion comprises: a storage portion (Fig. 1, host computer) which stores reference output information in advance (Fig. 4, col 9, lines 1-21); a checking portion which checks the reference output medium information with output medium information obtained by reading of the sheet for color calibration (Figures 4, 14C, col 18, lines 1-22); and a selecting portion which selects a test pattern for color calibration to be used for calibration from among test patterns for color calibration obtained by the reading according to the checked result (Figures 4, 14C, col 18, lines 1-22).

8. Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (US 6,975,418) in view of Otsuki (US 2003/0025922) as applied

to claim 1 above, and further in view of Klassen et al (Klassen) (US 2004/0165199).

Regarding **claim 4**, Ohta differs from claim 4, in that he and Otsuki do not expressly teach wherein the first reference patch and the second reference patch are arranged substantially in a single column.

Klassen discloses a calibration method for an imaging device, in that he teaches wherein the first reference patch and the second reference patch are arranged substantially in a single column (Fig. 5, Para. [0041] and [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include the first reference patch and the second reference patch are arranged substantially in a single column taught by Klassen to represent a range of input color value from 0 to 255 fro each of cyan, magenta and yellow (Para. [0052]).

Regarding **claim 5**, Ohta differs from claim 5, in that he and Otsuki do not expressly teach wherein the test pattern is formed on a color-by-color basis of cyan, magenta, and yellow, and includes a plurality of density regions arranged column-wise in order of color brightness or in order of color darkness along a reading direction of the calibration sheet.

Klassen teaches wherein the test pattern is formed on a color-by-color basis of cyan, magenta, and yellow, and includes a plurality of density regions arranged column-wise in order of color brightness or in order of color darkness along a reading direction of the calibration sheet (Fig. 5, Para. [0041] and [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include the test pattern is formed on a color-by-color basis of cyan, magenta, and yellow, and includes a plurality of density regions arranged column-wise in order of color brightness or in order of color darkness along a reading direction of the calibration sheet taught by Klassen to represent a range of input color value from 0 to 255 fro each of cyan, magenta and yellow (Para. [0052]).

Regarding **claim 6**, Ohta differs from claim 6, in that he and Otsuki do not expressly teach wherein the test pattern has a mixed color of cyan, magenta, and yellow, and includes a plurality of density regions arranged column-wise in order of color brightness or in order of color darkness along a reading direction of the calibration sheet.

Klassen teaches wherein the test pattern has a mixed color of cyan, magenta, and yellow, and includes a plurality of density regions arranged column-wise in order of color brightness or in order of color darkness along a reading direction of the calibration sheet (Fig. 5, Para. [0041] and [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include the test pattern has a mixed color of cyan, magenta, and yellow, and includes a plurality of density regions arranged column-wise in order of color brightness or in order of color darkness along a reading direction of the calibration sheet taught by Klassen to represent a range of input color value from 0 to 255 fro each of cyan, magenta and yellow (Para. [0052]).

Regarding **claim 7**, Ohta differs from claim 7, in that he and Otsuki do not expressly teach wherein the test pattern and the output medium information patch are arranged substantially in a single column.

Klassen teaches wherein the test pattern and the output medium information patch are arranged substantially in a single column (Para. [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include the test pattern and the output medium information patch are arranged substantially in a single column taught by Klassen to represent a range of input color value from 0 to 255 fro each of cyan, magenta and yellow (Para. [0052]).

Regarding **claim 8**, Ohta differs from claim 8, in that he and Otsuki do not expressly teach wherein the test pattern, the output medium information patch, the first reference patch, and the second reference patch are arranged substantially in a single column.

Klassen teaches wherein the test pattern, the output medium information patch, the first reference patch, and the second reference patch are arranged substantially in a single column (Para. [0052]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include the test pattern, the output medium information patch, the first reference patch, and the second reference patch are arranged substantially in a single column taught by Klassen to represent a range of input color value from 0 to 255 fro each of cyan, magenta and yellow (Para. [0052]).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (US 6,975,418) in view of Otsuki (US 2003/0025922) as applied to claim 1 above, and further in view of Klie et al (Klie) (US 4,486,772).

Regarding **claim 9**, Ohta teaches wherein the output medium information patch includes a combination of patches having any one of white, black, cyan, magenta (Fig. 8, col 13, lines 15-24).

Ohta differs from claim 9, in that he does not teach a mixed color of cyan and magenta.

Klie teaches a mixed color of cyan and magenta (col 10, lines 27-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Ohta to include a mixed color of cyan and magenta taught by Klie to determine a color mixing ratio (9, lines 41-49).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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September 7, 2007

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